

*Al
Com*

electrical current is conducted by the conductors and a body of a phase change material such as a thermoplastic substantially encapsulating the stator. A rotatable hub having a magnet connected thereto is in operable proximity to the stator. The high speed motor also includes a shaft, a bearing surrounding the shaft and one of the bearing or shaft being fixed to the stator assembly and the other of the bearing or shaft being fixed to the rotatable hub. Hard disc drives using the motor, and methods of developing and constructing the motor and hard disc drives are also disclosed.

Please rewrite the paragraphs on page 27, line 4, to page 28, line 9, as follows:

Most thermoplastic materials have a relatively high CLTE. Some thermoplastic materials may have a CLTE at low temperatures that is similar to the CLTE of metal. However, at higher temperatures the CLTE does not match that of the metal. A preferred thermoplastic material will have a CLTE of less than 2×10^{-5} in/in °F, more preferably less than 1.5×10^{-5} in/in °F, throughout the expected operating temperature of the motor, and preferably throughout the range of 0-250°F. Most preferably, the CLTE will be between about 0.8×10^{-5} in/in °F and about 1.2×10^{-5} in/in °F throughout the range of 0-250°F. (When the measured CLTE of a material depends on the direction of measurement, the relevant CLTE for purposes of defining the present invention is the CLTE in the direction in which the CLTE is lowest.)

a2
The CLTE of common solid parts used in a motor are as follows:

	<u>23°C</u>	<u>250°F</u>
Steel	0.5	0.8 ($\times 10^{-5}$ in/in °F)
Aluminum	0.8	1.4
Ceramic	0.3	0.4

Of course, if the motor is designed with two or more different solids, such as steel and aluminum components, the CLTE of the phase change material would preferably be one that was intermediate the maximum CLTE and the minimum CLTE of the different solids, such as 0.65 in/in °F at room temperature and 1.1×10^{-5} in/in °F at 250°F.

JNS. B → One preferred thermoplastic material, Konduit OTF-212-11, was made into a thermoplastic body and tested for its coefficient of linear thermal expansion by a standard ASTM test method. It was found to have a CLTE in the range of -30 to 30°C of 1.09×10^{-5} in/in °F in the X direction and 1.26×10^{-5} in/in °F in both the Y and Z directions, and a CLTE in the range of 100 to 240°C of 1.28×10^{-5} in/in °F in the X